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JAPAN'S PLANT EXPORT ACTIVITIES

Summary

Japan's plant exports are considered a key export initiative, advancing overseas investments, establishing ties with developing countries, and often securing the import of natural resources. Since many projects require large-scale official and private financing and many companies can be involved in a specific consortium, the government tends to follow these activities closely and there is always lively coverage in the press. This paper will discuss the steps involved in developing these exports and analyze some of the problems that accompany these potentially profitable but at the same time risky ventures.

Definition

What precisely constitutes a plant export is often a matter of debate, although a loose definition would cover exports that combine capital equipment, technology, construction and managerial expertise in one package. But, as described below, the Japanese government considers shipment of heavy machinery to the importing country to be plant exports as well. More complicated projects include preliminary feasibility studies, formal bidding, financing, construction and technology. Activities involve trading companies, manufacturers, construction firms, commercial and government banks and shipping concerns, and contracts amount to millions of dollars.

Japanese trade statistics list plant exports under two categories. Projects that are financed by international institutions or with commercial or government loans on a deferred payment basis and which require the approval of the Ministry of International Trade and Industry (MITI) comprise the first group. MITI's white papers on trade discuss this category of plant export. All those which do not require government approval fall in the second group. MITI conducts regular surveys to determine the level of activities of these exports.

MITI defines as plant exports all shipments of heavy machinery valued at more than $500,000, with the exception of transportation equipment such as ships, automobiles, trains and non-machinery. When the Organization for Economic Cooperation and Development (OECD) and the Japan Machinery Exporters' Association publish data on international plant investments, the figures are determined by selecting certain categories from the Standard International Trade Classification (SITC). Of 1980's total plant exports, West Germany accounted for 21 percent, the United States 19 percent and Japan 12 percent.[1] None of these statistics can capture precisely the package of activities and products that go into many plant construction projects. Feasibility studies, engineering, construction and training, for example, are service transactions, and not included in these statistical measures. The published statistics, though, give at least a rough approximation.

FY 1982 Record

As shown in Table 1, Japan's $13.4 billion in plant exports accounted for 10 percent of its total exports in FY 1982. By region, 46 percent went to Southeast Asia, 23 percent to the Middle East and 11 percent to Central and South America. Nearly 7 percent went to Africa, 4 percent to the communist bloc and 3 percent to Western Europe and North America. By types, the largest share went to electric machinery plants, followed by oil and natural gas refineries, petrochemical, steel and nonferrous metal facilities (Tables 2 and 3). Exports to Southeast Asia and the Pacific increased from the previous year, but were flat or declined substantially everywhere else, falling 23 percent from year-earlier figures. Large-scale projects of more than $100 million fell to a total of 22, valued at $7.5 billion, compared with 37 projects amounting to $10 billion in the previous year. The majority of these projects required suppliers' credit, and even the oil-producing countries, which formerly paid cash, chose deferred payments.

Assessment of Japan's Position

A recent report by the Plant Export Policy Committee, a MITI advisory group, suggests that Japanese exporters are succumbing to competition from French and West German groups.[2] In FY 1982, it notes, Japanese exporters lost out in 27 ventures, each worth ¥10 billion ($42 million). While this number is only slightly off the previous year's figures, the ratio of contracts lost to contracts won showed an increase. Two factors seemed to be of importance: exchange rates and cost competitiveness. Moreover, European governments have been increasingly using political muscle, aided by official development assistance (ODA), to attract contracts. At the same time, FY 1982's decline was also affected by a drop in demand as the worldwide recession reduced opportunities, as well as by financial problems in the oil-producing nations and mounting developing-country debt.

Another evaluation in the 1983 MITI White Paper on International Trade analyzes some problems in expanding plant exports.[3] The ministry notes that by developing desired technologies, expanding engineering training, and strengthening the civil engineering divisions of exporting companies, Japan's competitive position can be turned around. Both studies point out that Japanese exporters must improve their consulting services, project-development expertise, and feasibility studies — areas in which Japan is considered to be weaker than its American and European competitors.

Recently, a change in procedure involving broad international consortia has emerged. This involves participation by a number of foreign manufacturers, trading

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companies and financial institutions, which diversifies the huge costs and risks involved in large-scale plants. In 1982 there was a 40-percent increase in the contract value of international consortia in which Japanese firms participated. Increasingly now, importing countries are becoming more involved in plant construction, particularly the newly industrializing countries in Latin America and Southeast Asia. In this way they can capture a large share of the orders for local procurement, while depending on imported technology and capital. Because local procurement cuts costs, avoids trade conflicts and encourages long-term commercial relationships with the importing countries, MITI endorses participation in these projects. Overwhelmingly, the destination of Japanese plant exports is the developing countries, with financing provided by Japan. The Japan Machinery Exporters Association reports that, in 1982, individual companies handled 23 percent of Japan's plant exports, domestic consortia 36 percent, and international consortia 41 percent.

Export Procedure and Financing

Government approval is required for all plant projects in the deferred-payment category and is handled by MITI in consultation with the Ministry of Finance. Generally speaking, companies file preliminary agreements, and if contracts are signed within one year without serious changes, approval is automatic.[5] In most cases, exporters apply for financing by the Japan Export-Import Bank (Ex-Im Bank), in addition to commercial banks. The Ex-Im Bank, a government financial institution, draws funds from the government's Industrial Investment Special Account and borrows from the government's Trust Fund Bureau and from foreign financial institutions and international capital markets. The bank's function is to supplement financing by commercial banks and other financial institutions for plant and ship exports, to provide funds to develop and import natural resources, and to expand overseas investment activities. The traditional method for financing exports through export suppliers' credits covers payment of all contract costs except for the downpayment, with interest rates and repayment schedules set by OECD guidelines.[6] The exporter is covered by government insurance against losses from war, internal disorder or bankruptcy. Financing by the Ex-Im Bank supplements commercial bank and other loans up to 70 percent of the export contract amount. The exporter can also take advantage of a tax deduction on emergency funds to meet unexpected problems such as exchange-rate fluctuations.

Plant exports tend to be led by Japan's large trading companies, whose global information networks constantly track possible projects. In addition, government agencies involved in economic development evaluate host-country requirements and assess plant export opportunities. When government and industry cooperate on large-scale plant exports, they are designated "national projects." An aluminum plant in Indonesia, petrochemical plants in Saudi Arabia, Iran and Singapore and three plants in Brazil are examples of this category of investment.

Considering the scale of plant exports and the risks involved in developing countries, an evaluation of country risk is vital in all of these projects. At the government level, information is sought from overseas embassies, the Ex-Im Bank's overseas branches, offices of the Overseas Economic Cooperation Fund and the Japan External Trade Organization (JETRO). Government research institutions such as the Institute of Asian Economies conduct country-by-country studies. Both government and private-sector banks are active in these assessments. Trading companies and manufacturers rely on their own networks to provide commercial information. Nevertheless, the accuracy of the assessment is often in question because so much of the information is subject to political and foreign policy interpretations. In terms of quantity, Japanese exporters and financial institutions have enough information, but particular attention must be paid to strategic concerns. This caution applies t all exporters, however, since high risks are inherent in these projects.

Trading Companies

The press frequently highlights the role of the major trading companies in project coordination. These organizations gather information, coordinate financing and function as intermediaries for participating companies, drawing commissions from such services. Trading companies employ substantial numbers of legal experts who help negotiate contracts for the manufacturers whose technological expertise the trading company is selling. Their network of international resident offices makes them well suited to handle investments through international consortia, particularly in cases involving non-cash payments, such as counter-purchases. With experience, some individual manufacturers are confident that they can challenge the trading companies' role using electronic telecommunications and in-house information services. However, as the trading firms also have access to these devices and a superior intelligence and financial network supplying information on economic and political conditions, they are in a strong position. In fact, recently, they have been active in energy development and third-country trade as well as plant exports. All the major trading companies are said to have been training large numbers of new college graduates in departments related to the expansion of these projects.[7]

The uncertainties posed by developments in host countries have been demonstrated by the problem-ridden Bandar Khomeini petrochemical plant in Iran. Mitsui & Co., one of the top trading companies, was a leading force in this project, initiated in 1971. The plant was designed to produce 300,000 tons of ethylene and 1.9 million tons of liquefied petroleum gas annually. The cost was estimated at ¥730 billion ($3 billion). When political disorders halted construction in the spring of 1979, the plant was 85 percent completed. Because of the size and importance of the investment, the Japanese government agreed to extend financial support, elevating the enterprise to the designation of a national project. When the war between Iran and Iraq erupted in 1980, the plant was bombed repeatedly by Iraqi planes, and negotiations with Iran to resume construction have so far made little progress.

The weak performance of several other large projects is notable. Saudi Arabia recently cancelled a ¥200 billion ($830 million) water-purification plant undertaken by a Japanese group led by Sumitomo Corp. An accompanying electric generating plant contract won by another Japanese group was also cancelled. While the Saudi government did not disclose any reasons, it is assumed that a revenue shortage springing from the oil glut has forced cutbacks in its ambitious development plans. Additionally, a project in Qatar has been postponed and there is a dispute with Iraq concerning payments for on-going plant construction.

Future Prospects

According to MITI's survey of prospective contracts in FY 1983, the number of projects being negotiated is about the same as last year, but commitments are down for reasons detailed earlier in this report. In spite of this, the incentives are still strong and the government is trying to improve Japan's competitiveness by devising policies to help exporters. One recommendation from the Plant Export Policy Committee calls for the expansion of official export credits by increasing the funds of the Ex-Im Bank. Export insurance was revamped last spring to meet escalating country-risk situations. Increased economic assistance, particularly yen loans, was recommended, in addition to exploring new and innovative assistance programs. In order to counter aggressive European use of official development assistance to promote plant exports in the form of mixed loans, the committee urged the government to come up with an effective matching scheme.

Although the risks are high, the plant export drive is expected to continue. From the government's point of view, the development and trade components of the projects are effective in foreign economic policy. For the host country, plant construction and manufacturing expansion are essential. Technological transfers deriving from the projects offer self sufficiency and potential exports. The only catch is to identify projects with the potential for successful operations in sometimes-turbulent regions.

Footnotes

[1]Ministry of International Trade and Industry (MITI), Tsusho Hakusho (White Paper on International Trade), 1982, p. 224.

[2]MITI, Plant Export Policy Committee Report, Tsusansho Koho (Gazette), June 23, 1983.

[3]MITI, White Paper 1983, pp. 240-248.

[4]Ibid, p. 245.

[5]Masaru Saito, ed., Plant Yushutsu no Jitsumu (Guidebook on Plant Exports), Diamond-sha, 1976, p. 100.

[6]The Export-Import Bank of Japan, Role and Function, 1982.

[7]Nikkei Business, ed., Shosha Fuyu no Jidai (Trading Companies in a Wintery Era), Nihon Keizai Shimbun, 1983, pp. 90-95.

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Table 1: Japan's Plant Exports

(in billions of dollars)

	Government-Approved		Others		Total Amount	Ratio to Total Exports	
	Number of Contracts	Amount	Number of Contracts	Amount		Approved Contracts	All Contracts
FY 1973	350	$2.2	n.a.	n.a.	n.a.	5.5%	n.a.
FY 1974	415	3.9	n.a.	n.a.	n.a.	6.6	n.a.
FY 1975	489	5.2	n.a.	n.a.	n.a.	9.2	n.a.
FY 1976	680	8.0	n.a.	n.a.	n.a.	11.3	n.a.
FY 1977	736	8.6	n.a.	n.a.	n.a.	10.2	n.a.
FY 1978	753	8.7	n.a.	n.a.	n.a.	8.8	n.a.
FY 1979	743	11.8	200	$1.1	$12.9	11.0	12.0%
FY 1980	677	8.9	340	2.9	11.8	6.5	8.5
FY 1981	455	12.3	392	5.1	17.5	8.1	11.5
FY 1982	386	10.9	525	2.5	13.4	7.8	9.6

Notes: 1)Government approved projects include all export contracts for machinery exceeding $500,000, (excluding transportation equipment), that are made on a deferred payment basis.

2)Others (those which do not require government approval) follow the same definition, but are not on a deferred payment basis. The survey of this category began in FY 1979.

Source: Tsusansho Koho, (MITI Gazette), June 23, 1983.

Table 2: Plant Exports by Region

(in millions of dollars)

	FY 1980			FY 1981			FY 1982		
	Number of Contracts	Amount	Ratio to Total Exports	Number of Contracts	Amount	Ratio to Total Exports	Number of Contracts	Amount	Ratio to Total Exports
Southeast Asia	196 (313)	$2,436 (3,134)	27.3% (26.6)	160 (314)	$4,411 (5,738)	35.8% (32.9)	111 (303)	$5,358 (6,094)	49.3% (45.6)
Middle East	124 (165)	1,744 (2,903)	19.5 (24.6)	62 (125)	2,530 (4,760)	20.6 (27.3)	63 (141)	2,284 (3,116)	21.0 (23.3)
Africa	41 (70)	1,648 (1,877)	18.4 (15.9)	64 (99)	1,392 (1,667)	11.3 (9.5)	64 (112)	690 (883)	6.3 (6.6)
Central and Latin America	81 (146)	791 (1,185)	8.9 (10.0)	43 (96)	651 (1,504)	5.3 (8.6)	39 (88)	1,275 (1,457)	11.7 (10.9)
Communist Bloc	104 (135)	1,277 (1,379)	14.3 (11.7)	47 (78)	1,422 (1,658)	11.5 (9.5)	48 (121)	296 (590)	2.7 (4.4)
Pacific Area	26 (38)	264 (290)	3.0 (2.5)	23 (36)	625 (681)	5.1 (3.9)	24 (45)	723 (817)	6.6 (6.1)
Western Europe & North America	105 (150)	723 (1,024)	8.6 (8.7)	56 (99)	1,281 (1,451)	10.4 (8.3)	37 (101)	250 (415)	2.3 (3.1)
Total	677 (1,017)	8,932 (11,793)	100.0 (100.0)	455 (874)	12,313 (17,459)	100.0 (100.0)	386 (911)	10,875 (13,363)	100.0 (100.0)

Notes: The figures in parentheses refer to projects that do not require government approval.

Source: Tsusansho Koho, (MITI Gazette), June 23, 1983.

Table 3: Plant Exports by Category

(in millions of dollars)

	FY 1980			FY 1981			FY 1982		
	Number of Contracts	Amount	Ratio to Total Exports	Number of Contracts	Amount	Ratio to Total Exports	Number of Contracts	Amount	Ratio to Total Exports
Electric Machinery	140 (220)	$2,078 (2,359)	23.3% (20.0)	116 (201)	$3,449 (4,402)	28.0% (25.2)	96 (209)	$2,549 (2,961)	23.4% (22.2)
Telecommunications Equipment	115 (159)	399 (514)	4.5 (4.4)	69 (129)	744 (941)	6.0 (5.4)	74 (164)	531 (722)	4.9 (5.8)
Textile Machinery	21 (59)	82 (149)	0.9 (1.3)	13 (59)	38 (122)	0.3 (0.7)	6 (57)	17 (101)	0.2 (0.8)
Petroleum & Natural Gas Refineries	23 (30)	855 (1,664)	9.6 (14.1)	20 (56)	2,134 (4,086)	17.3 (23.4)	14 (40)	2,541 (2,957)	23.4 (22.1)
Petrochemical Plants	18 (46)	567 (652)	6.4 (5.5)	9 (23)	364 (1,353)	3.0 (7.8)	13 (22)	996 (1,485)	9.2 (11.1)
Fertilizer Plants	6 (12)	204 (539)	2.3 (4.6)	7 (9)	555 (564)	4.5 (3.2)	5 (13)	878 (913)	8.1 (6.8)
Pharmaceutical Plants	10 (10)	277 (277)	3.1 (2.4)	3 (4)	18 (20)	0.2 (0.1)	-- (2)	-- (40)	-- (0.3)
Synthetic Fabrics Plants	1 (4)	0.8 (22)	0.0 (0.2)	3 (7)	160 (244)	1.3 (1.4)	3 (6)	64 (69)	0.6 (0.5)
Paper & Pulp Plants	2 (5)	9 (31)	0.1 (0.3)	3 (10)	35 (47)	0.3 (0.3)	2 (10)	3 (18)	0.0 (0.1)
Ceramic Plants	7 (13)	321 (424)	3.6 (3.6)	9 (16)	592 (666)	4.8 (3.8)	8 (12)	74 (82)	0.7 (0.6)

	FY 1980			FY 1981			FY 1982		
	Number of Contracts	Amount	Ratio to Total Exports	Number of Contracts	Amount	Ratio to Total Exports	Number of Contracts	Amount	Ratio to Total Exports
Food, Beverage & Water Purifying Plants	16 (21)	179 (185)	2.0 (1.6)	16 (22)	706 (716)	5.7 (4.1)	9 (25)	310 (404)	2.8 (3.0)
Steel & Non-Ferrous Metal Plants	62 (86)	2,347 (2,487)	26.3 (21.1)	26 (47)	556 (604)	4.5 (3.5)	24 (45)	1,749 (1,802)	16.1 (13.5)
Resource Development & Civil Engineering Plants	35 (80)	740 (1,337)	8.3 (11.3)	28 (66)	1,192 (1,467)	9.7 (8.4)	20 (48)	331 (516)	3.0 (3.9)
Steel-Using Construction	24 (40)	89 (141)	1.0 (1.2)	3 (11)	47 (82)	0.4 (0.5)	3 (6)	28 (55)	0.3 (0.4)
Others	188 (232)	784 (1,012)	8.8 (8.6)	130 (187)	1,721 (2,144)	14.0 (12.3)	109 (252)	804 (1,187)	7.4 (8.9)
Total	677 (1,017)	8,932 (11,793)	100.0 (100.0)	455 (847)	12,313 (17,459)	100.0 (100.0)	386 (911)	10,875 (13,363)	100.0 (100.0)

Notes: The figures in parentheses refer to projects that do not require government approval.

Source: Tsusansho Koho, (MITI Gazette), June 23, 1983.